CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 84-34
NPDES NO. CA0037737

REISSUING WASTE DISCHARGE REQUIREMENTS FOR:

NORTH SAN MATEO COUNTY SANITATION DISTRICT
DALY CITY, SAN MATEO COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter called the Board) finds that:

1. North San Mateo County Sanitation District, hereinafter called the discharger, submitted a report of waste discharge dated December 28, 1982 for reissuance of NPDES Permit No. CA0037737.

2. The discharger presently discharges an average dry weather flow of 6.8 million gallons per day (mgd) from its secondary treatment plant which has a dry weather design capacity of 8.0 mgd. This plant treats domestic and 10 percent commercial wastewater from Daly City and portions of Colma and South San Francisco. The treated wastewater is discharged into the Pacific Ocean, a water of the State and United States, west of the Vista Grande Tunnel structure on Ocean Beach, San Francisco County through a submerged diffuser about 2500 feet offshore at a depth of 32 feet below mean lower low water. Latitude 37 deg., 42 min., 48 sec.; Longitude 122 deg., 30 min., 50 sec.

3. During dry weather, treated wastewater is discharged by gravity to an open storm channel just before it goes underground through the Vista Grande Tunnel. There it combines with any drainage water present and is discharged through the 33-inch ocean outfall. During wet weather, whenever the hydraulic capacity of the Vista Grande Tunnel may be exceeded, treated wastewater is discharged via force main around the Tunnel directly to the outfall.

4. The discharge is presently governed by Waste Discharge Requirements, Order Nos. 79-24 and 79-110 which allow discharge into the Pacific Ocean.

5. The State Water Resources Control Board, in November 1983, adopted the revised "Water Quality Control Plan for the Ocean Waters of California" which contains water quality objectives for the Pacific Ocean.

6. The beneficial uses of the Pacific Ocean are:

   - Water contact and Non-contact water recreation
   - Wildlife Habitat
   - Preservation of Rare and Endangered Species
   - Marine Habitat
   - Fish migration and spawning
   - Industrial service supply
   - Shellfish Harvesting
   - Navigation
   - Commercial and Sport Fishing

7. The discharger has submitted an application for a waiver from secondary treatment requirements for deep water discharge into marine waters in accordance with Section 301(h) of the 1981 Amendments to the Clean Water Act. This application is being reviewed by the Environmental Protection Agency (EPA). If such waiver is granted by EPA, the Board will make appropriate modifications to this Order.

8. Transmission facilities have been constructed as the first phase of a golf course irrigation wastewater reclamation project. The golf course has been unwilling to date to accept any reclaimed water. The reclamation project is governed by this Board's Order No. 78-71.

9. An Operations and Maintenance Manual is maintained by the discharger for purposes of providing plant and regulatory personnel with a source of information describing all equipment, facilities, and recommended operating strategies, process control monitoring, and maintenance activities. In order to remain a useful and relevant document, this manual should be kept updated to reflect significant changes in plant facilities or activities.

10. This Order serves as an NPDES permit, adoption of which is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.

11. The discharger and interested agencies and persons have been notified of the Board's intent to reissue requirements for the existing discharge and have been provided with the opportunity for a public hearing and the opportunity to submit their written views and recommendations.

12. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, that the discharger in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and the provisions of the Clean Water Act as amended and regulations and guidelines adopted thereunder shall comply with the following:

A. Discharge Prohibitions

1. Bypass or overflow of untreated or partially treated wastewater to waters of the State either at the treatment plant or from any of the collection system and pump stations tributary to the treatment plant is prohibited.

2. The average dry weather flow shall not exceed 8.0 mgd. Average shall be determined over three consecutive months each year.

3. Discharge within 1000 feet offshore from the extreme low waterline is prohibited.

4. The discharge of waste effluents in a manner which does not provide sufficient initial dilution to minimize the concentrations of substances not removed in the treatment is prohibited.

5. The discharge of municipal and industrial waste sludge directly to the ocean, or into a waste stream that discharges to the ocean, is prohibited. The discharge of sludge digester supernatant directly to the ocean, or into a waste stream that discharges to the ocean without further treatment is prohibited.

B. Effluent Limitations

1. Effluent discharged shall not exceed the following limits:

Constituents	Units	30-day Average	7-day Average	Maximum Daily	Instantaneous Maximum
a. Settleable Matter	ml/l-hr	0.1	-	-	0.2
b. BOD_5 or	mg/l	30	45	60	-
Carbonaceous BOD_5(2)	mg/l	25	40	50	-
c. Total Suspended Solids	mg/l	30	45	60	-
d. Oil & Grease	mg/l	10	-	-	20
e. Total Chlorine Residual (1)	mg/l	-	-	-	0.0
f. Turbidity	NTU	75	100	225	-
g. Toxicity Concentration	tu	1.5	2.0	2.5	-

(1) Requirement defined as below the limit of detection in standard test methods.

(2) Effective upon its promulgation in a new secondary treatment defintion.

2. The arithmetic mean of the biochemical oxygen demand (5-day, 20°C) and suspended solids values, by weight for effluent samples collected in a period of 30 consecutive calendar days shall not exceed 15 percent of the arithmetic mean of the respective value, by weight, for influent samples collected approximately the same times during the same period (85 percent removal).

3. The pH of the discharge shall not exceed 9.0 nor be less than 6.0.

4. If the discharger elects to document compliance with the coliform receiving water limitation exclusively in the effluent and so notifies the Board, in writing, the frequency of receiving water coliform monitoring will be reduced accordingly and the following effluent limitations will apply:

The moving median value for the MPN of total coliform in any five (5) consecutive effluent samples shall not exceed 2400 coliform organisms per 100 milliliters. Any single sample shall not exceed 24,000 MPN/100 ml.

During the wet weather months of October through April inclusive, effluent shall not exceed a five sample moving median of 24,000 MPN/100 ml.

5. Representative samples of the effluent shall not exceed the following limits:

Constituent	Unit of Measurement	6-Month Median	Daily Maximum	Instantaneous Maximum
Arsenic	mg/l	0.01	0.04	0.1
Cadmium	ug/l	0.02	0.08	0.2
Chromium (Hexavalent) see below, (b)	mg/l	0.005	0.02	0.05
Copper	mg/l	0.2	0.8	2.0
Lead	mg/l	0.1	0.4	1.0
Mercury	mg/l	0.001	0.004	0.01
Nickel	mg/l	0.1	0.4	1.0
Silver	mg/l	0.02	0.08	0.2
Zinc	mg/l	0.3	1.2	3.0
Cyanide	mg/l	0.1	0.4	1.0
Ammonia (expressed as nitrogen)	mg/l	40	160	400
Phenolic Compounds (non-chlorinated)	mg/l	0.5	2.0	5.0
Chlorinated Phenolics (a)	mg/l	0.05	0.20	0.50
Aldrin and Dieldrin (a)	ug/l	0.10	0.20	0.30
Chlordane and Related Compounds (a)	ug/l	0.15	0.30	0.45
DDT and Derivatives (a)	ug/l	0.05	0.10	0.15
Endrin (a)	ug/l	0.10	0.20	0.30
HCH (a)	ug/l	0.20	0.40	0.60
PCBs (a)	ug/l	0.15	0.30	0.45
Toxaphene (a)	ug/l	0.35	0.70	1.05
Radioactivity	Not to exceed limits specified in Title 17, Chapter 5, Subchapter 4, Group 3, Article 3, Section 30269 of the California Administrative Code.			

(a) Based on Ocean Plan criteria using a minimum initial dilution of 50:1. If actual dilution is found to be less than 50:1, these values will be recalculated.

(b) Dischargers may at their option meet this limitation as a total chromium limitation.

(c) If the discharger is unable to comply with these limitations and can show good cause for such failure, the Board will consider modification of these limits.

C. Receiving Water Limitations

1. Floating particulates and grease and oil shall not be visible.

2. The discharge of waste shall not cause esthetically undesirable discoloration of the ocean surface.

3. Natural light shall not be significantly reduced at any point outside the initial dilution zone as the result of the discharge of waste.

4. The rate of deposition of inert solids and the characteristics of inert solids in ocean sediments shall not be changed such that benthic communities are degraded.

5. The dissolved oxygen concentration shall not at any time be depressed more than 10 percent from that which occurs naturally, as the result of the discharge of oxygen demanding waste materials.

6. The pH shall not be changed at any time more than 0.2 units from that which occurs naturally.

7. The dissolved sulfide concentration of waters in and near sediments shall not be significantly increased above that present under natural conditions.

8. The concentration of substances set forth in Chapter IV, Table B of the "Water Quality Control Plan for Ocean Waters of California" dated November 1983, in marine sediments shall not be increased to levels which would degrade indigenous biota.

9. The concentration of organic materials in marine sediments shall not be increased to levels which would degrade marine life.

10. Nutrient materials shall not cause objectionable aquatic growths or degrade indigenous biota.

11. Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded.

12. The natural taste, odor, and color of fish, shellfish, or other marine resources used for human consumption shall not be altered.

13. Discharge of radioactive waste shall not degrade marine life.

14. The following bacteriological limits shall not be exceeded throughout the water column (a) within a zone bounded by the shoreline and either the 30-foot depth contour or a distance of 1,000 feet from the shoreline, whichever is greater; and (b) in areas outside this zone used for body contact recreation:

Parameter Applicable to any 30-Day Period	Total Coliform Organisms (MPN/100 ml)	Fecal Coliform Organisms (MPN/100 ml)
Log Mean	- - -	200
**90% of Samples	- - -	400
80% of Samples	1,000	- - -
*Maximum	10,000	- - -

*Verified by a repeat sample taken within 48 hours.

**Applicable to any 60-Day period.

15. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

D. Provisions

1. The requirements prescribed by this Order supersede the requirements prescribed by Order Nos. 79-24 and 79-110. Order Nos. 79-24 and 79-110 are hereby rescinded.

2. The discharger shall comply with all sections of this Order immediately upon adoption.

3. The discharger shall comply with the self-monitoring program as adopted by the Board and as may be amended by the Executive Officer.

4. The discharger shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated April 1977.

5. Where concentration limitations in mg/l are contained in this permit, the following mass emission limitations shall also apply as follows:

   Mass Emission Limit in kg/day = Concentration limit in mg/l x 3.79 x Actual Flow in mgd averaged over the time interval to which the limit applies.

6. The discharger shall review and update his Operations and Maintenance Manual annually, or in the event of significant facility or process changes, shortly after such changes have occured. Annual revisions, or letters stating that no changes are needed, shall be submitted to the Regional Board by April 15 of each year. A time schedule for completion of the initial revision shall be submitted by July 15, 1984. Documentation of operator input and review shall accompany each annual update.

7. The discharger shall review and update by April 15 annually its contingency plan as required by Board Resolution No. 74-10. The discharge of pollutants in violation of this Order where the discharger has failed to develop and/or implement a contingency plan will be basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.

8. Production and use of reclaimed water is subject to the approval of the Board. Production and use of reclaimed water shall be in conformance with reclamation criteria established in Chapter 3, Title 22, of the California Administrative Code and Chapter 7, Division 7, of the California Water Code. An engineering report pursuant to section 60323, Title 22, of the California Administrative Code is required and a waiver or water reclamation requirements from the Board is required before reclaimed water is supplied any use, or to any user, not specifically identified and approved in this Order.

9. The discharger shall prepare a Wet Weather Flow Management Plan to be approved by the Board and amended, as necessary, to the satisfaction of the Executive Officer according to the following schedule:

Task	Compliance Date	Date Report Due
a. Submit Wet Weater Flow Management Plan, acceptable to the Executive Officer, for sewer maintenance, repair, and replacement and other facility construction to reduce, control, or eliminate excessive wet weather flows and overflows. Quarterly status reports shall be submitted during development of this plan.	July 1, 1985	September 15, 1984 December 15, 1984 March 15, 1985 (Quarterly Status Reports) July 15, 1985 (Final Report)
b. Submit annual progress reports quantifying any sewerage system improvements and their impacts on compliance, wet weather flow quantity, overflow/bypass frequency, and summarizing proposed actions for coming year.	July 1 (each year from 1984 until full compliance is acheived)	July 15 (each year)

Nothing in this schedule shall eliminate the need for compliance with secondary treatment for all discharges.

10. This Order expire June 20, 1989. The discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.

11. This Order shall serve as National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall becomes effective 10 days after date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Roger B. James, Executive Officer do hereby certify the foregoing is full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on June 20, 1984.

ROGER B. JAMES
Executive Officer

Attachments:
Standard Provision & Reporting
Requirements, April 1977
Self-Monitoring Program
Resolution 74-10

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

North San Mateo County Sanitation District

San Mateo County

NPDES NO. CA0037737

ORDER NO. 84-34

CONSIST OF

PART A, dated January 1978

AND

PART B

PART B

NORTH SAN MATEO COUNTY SANITATION DISTRICT

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT AND INTAKE

Station	Description
A-001	At any point in the treatment facilities headworks at which all waste tributary to the system is present, preceding any phase of treatment, and exclusive of any return flows or process sidestreams.

B. EFFLUENT

Station	Description
E-001	At any point in the treatment facilities between the point of discharge and the point at which all waste tributary to that outfall is present following dechlorination.
E-001-D	At any point in the treatment facilities after disinfection is complete and prior to dechlorination.

C. RECEIVING WATERS

Station	Description
C	At the outfall sewer
C-1-N	50 feet north of outfall sewer
C-2-N	100 feet north of outfall sewer
C-3-N	500 feet north of outfall sewer
C-1-S	50 feet south of outfall sewer
C-2-S	100 feet south of outfall sewer
C-3-S	500 feet south of outfall sewer

D. LAND OBSERVATIONS

Station	Description
P-1 thru P-'n'	Located along the periphery of the waste treatment or disposal facilities, at equidistant intervals, not to exceed 500 feet. (A sketch showing the locations of these stations will accompany each report.)

E. OVERFLOWS AND BYPASSES

Station	Description
OV-1 thru OV-'n'	Bypass or overflows from manholes, pump stations, or collection system.

NOTE: Initial SMP report to include map and description of each known bypass or overflow location, and report on pump station alarms, pumping capacity, upstream storage capacity and bypass location.

Reporting - Shall be submitted monthly and include date, time and period of each overflow or bypass and measures taken or planned to prevent future occurrences (see Part A, Section F.2.).

II. SCHEDULE OF SAMPLING AND ANALYSIS

A. The Schedule of sampling and analysis shall be that given as Table I.

I, Roger B. James, Executive Officer, do hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No 84-34.

2. Is effective on the date shown below.

3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Offer or request from the discharger and revisions will be ordered by the Executive Officer.

ROGER B. JAMES
Executive Officer

Effective Date_____

Attachments:
Table I and Legend for Table

Order No._____

TABLE 1

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	A-001	E-001			E-001-D		All P Sta	All OV Sta	All C Sta		
TYPE OF SAMPLE	C-24	(3) G	(3) C-24	Cont	(3) G	C-24	O	O	(5) G		
Flow Rate (mgd)				D							
BOD, 5-day, 20°C, CBOD5; or COD (mg/l & kg/day)	3/W		5/W								
Chlorine Residual & Dosage (mg/l & kg/day)		2H	(6) or Cont		2H	(6) orCont					
Settleable Matter (ml/l-hr. & cu. ft./day)		D									
Total Suspened Matter (mg/l & kg/day)	3/W		D								
Oil and Grease (mg/l & kg/day)	2/M	(2) 2/M									
Coliform (Total or Fecal)(4) (MPN/100 ml) per req't (5)					5/W				M		
Fish Tox'y 96-hr. TL or % Surv'l in undiluted waste			2/M								
Ammonia Nitrogen & Un-ionized Ammonia (mg/l & kg/day			(7) 2/M								
Nitrate Nitrogen (mg/l & kg/day)											
Nitrite Nitrogen (mg/l & kg/day)											
Total Organic Nitrogen (mg/l & kg/day)											
Total Phosphate (mg/l & kg/day)											
Turbidity (NTU)			D								
pH (units)		D	(7) 2/M								
Dissolved Oxygen (mg/l and % Saturation)		D									
Temperature (°C)		D									
Salinity (ppt)											
Secchi Disc (inches)											
Sulfides (if DO<5.0 mg/l) Total & Dissolved (mg/l)		D									
Arsenic (mg/l & kg/day)			(4) Q								
Cadmium (mg/l & kg/day)			(4) Q								
Chromium, Total (mg/l & kg/day)			(4) Q								
Copper (mg/l & kg/day)			(4) Q								
Cyanide (mg/l & kg/day)			(4) Q								
Silver (mg/l & kg/day)			(4) Q								
Lead (mg/l & kg/day)			(4) Q								

TABLE 1 (continued)

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	A-001	E-001			E-001-D		All P Sta	All OV Sta	All C Sta	Misc. Obsv.		
TYPE OF SAMPLE	C-24	G	C-24	Cont	G	C-24	O	O	O	O		
Mercury (mg/l & kg/day)			(4) Q									
Nickel (mg/l & kg/day)			(4) Q									
Zinc (mg/l & kg/day)			(4) Q									
Phenolic Compounds(non-chlorina.) (mg/l & kg/day)			(4) Q									
All Applicable Standard Observations		D					2/W	E	M			
Daily Rainfall										D		
Dewatered Sludge										(8) D		
Chlorinated Phenolics (mg/l & kg/day)			(4) 2/y									
Aldrin and Dieldrin (mg/l & kg/day)			(4) 2/y									
Chlordane & Related Com- (mg/l & kg/day)			(4) 2/y									
DDT and Derivatives (mg/l & kg/day)			(4) 2/y									
Endrin (mg/l & kg/day)			(4) 2/y									
HCH (mg/l & kg/day)			(4) 2/y									
PCBs (mg/l & kg/day)			(4) 2/y									
Toxaphene (mg/l & kg/day)			(4) 2/y									
Radioactivity (pCi/l)			(4) 2/y									

LEGEND FOR TABLE

TYPES OF SAMPLES

G = grab sample
C-24 = composite sample - 24-hour
Cont = continuous sampling
O = observation

TYPES OF STATIONS

A = treatment facility influent stations
E = waste effluent stations
C = receiving water stations
P = treatment facilities perimeter stations
OV = overflows and bypasses
Misc. Obsv. = Miscellaneous Observations

FREQUENCY OF SAMPLING

E = each occurence
H = once each hour
D = once each day
W = once each week
M = once each month
Y = once each year

2/H = twice per hour
2/W = 2 days per week
5/W = 5 days per week
2/M = 2 days per month
2/y = once in March and once in September
Q = quarterly, once in March, June, Sept. and December

2H = every 2 hours
2D = every 2 days
2W = every 2 weeks
3M = every 3 months
Cont = continuous

1/ During any day when bypassing occurs from any treatment unit(s) in the plant or to the emergency outfall, the monitoring program for the effluent and any nearshore discharge shall include the following in addition to the above schedule for sampling, measurement and analyses:

a. Composite sample for BOD and Total Suspended Solids.

b. Grab samples for Total Coliform, Settleable Matter and Oil and Grease.

c. Continuous monitoring of bypassed flow.

2/ In the event that sampling for oil and grease once every two weeks or less frequently shows an apparent violation of the waste discharge permit 30-day average limitation (considering the results of one or two day's sampling as a 30-day average), then the sampling frequency shall be increased to weekly so that a true 30-day average can be computed and compliance can be determined.

3/ Grab samples shall be taken on day(s) of composite sampling.

4/ If any sample is in violation of limits, sampling shall be increased for that parameter to weekly until compliance is demonstrated in two successive samples.

5/ Effluent coliform monitoring may be substituted for monthly receiving water monitoring as specified in Effluent Limitation B.4.

6/ Data shall be reported using forms provided or approved equivalent. Chlorine residual analyzers shall be calibrated against grab samples as frequently as necessary to maintain accurate control and reliable operation. If an effluent violation is detected, grab samples shall be taken every 30 minutes until compliance is achieved.

7/ These parameters shall be tested for on the same composite sample used for the bioassy.

8/ Daily records shall be kept of the quantity and solids content of dewatered sludge disposed of and the location of disposal.